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## RECEPTION

OF

DOM PEDRO D'ALCANTARA, EMPEROR OF BRAZIL; DR.  
AUGUSTUS PETERMANN, OF GOTHA; PROF. A. E.  
NORDENSKJÖLD, OF STOCKHOLM, AND DR.  
C. H. BERENDT, OF GUATEMALA.

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CHICKERING HALL, July 10, 1876.

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The President, Chief Justice DALY in the Chair:

The meeting was called to order at a quarter past 8 P. M., the attendance of Fellows being unusually large. Every seat in the hall and in the galleries was occupied, and there was a large attendance of ladies. Seated on the platform, with a large number of the officers and of the Council, were Dr. A. Petermann, of Gotha; Dr. C. H. Berendt, of Guatemala; P. Gloobhowsky and A. Goodecken, Russian Imperial Commissioners: Commander Pereira Pinto, Lieutenant Grumares and Surgeon F. Telles de Menezes, of the Russian war vessel *Nichteroy*; Professor Guyot, of Princeton; Professors O. C. Marsh and W. D. Whitney, of Yale; Professor Hilgard, U. S. Coast Survey; Professor F. V. Hayden, U. S. Geographical and Geological Survey of the Territories; Professor F. W. Putnam, of the Peabody Institute; Bayard Taylor, Professor W. M. Gabb, Henry C. Murphy, Rev. Dr. Potter, Professor Felix Adler, of Cornell; Rev. Wm. Farrell, Rev. John McGlynn, Benj. S. Lossing, Cyrus W. Field, Rev. Dr. Bellows, Rev. Nicholas Bjerring, Samuel J. Ruggles, Dr. Isaac I. Hayes, Judge R. L. Larremore, Judge James C. Spencer, Professor Julius Bien, Peter Cooper, Howard Potter, Gen. James Grant Wilson, Salem H. Wales, General Siegel. John W. Hammersley, Professor Cook, State Geologist of New Jersey; Dr. Schumacher, German Consul-General; Edward Bill, A. A. Low, C. E. Detmold, Algernon S. Sullivan, and several others.

After calling the meeting to order, the President, Chief-Justice DALY, rose and said:

"Our meeting has been called at this unusual season of the year, because the celebration of our national centennial having brought

together persons from all parts of the globe, the opportunity is afforded to us, by assembling the Society now, of inviting the distinguished guests who have done us the honor to be present to-night. This very large attendance of the Fellows, many of whom must have come from those retreats in the country to which all escape who can do so at this heated season, is such an evidence of the interest felt in this meeting—of the desire to be present and to welcome our guests—as almost to dispense with the formality of a welcome on my part. The paper of the evening will be read by one of our distinguished visitors, Dr. Berendt. It is entitled ‘The Centers of Civilization in Central America and their Geographical Distribution,’ a subject upon which Dr. Berendt may be regarded as the highest living authority, having passed many years of his life in Guatemala and other parts of Central America, ardously engaged in philological and ethnological researches. To his labors we are indebted for the collection and preservation of numerous vocabularies, and for a large amount of valuable work in the critical investigation, classification and arrangement of the languages belonging to, or descended from, the ancient civilizations of Central America, the fruits of which will soon be made known to the world in the publication by the Smithsonian Institution of the large work upon which Dr. Berendt has been so long engaged.”

Dr. Berendt was then intrduced by the president, and read the following paper:

GEOGRAPHICAL DISTRIBUTION OF THE ANCIENT CENTRAL  
AMERICAN CIVILIZATION.

If what I am going to say bears not exactly, because it cannot well bear, the aspect of those centennial thoughts and orations that now fill every ear and engross the attention of Americans all over the country, of civilized men all over the world, it is still to a kindred subject that I invite you to follow me. I am still going to speak of the past of America, only that, taking a somewhat wider range in space and time, I intend leading you back rather more than three centuries, instead of one, and over the boundaries of our own country into those regions which now seem to be little more than the connecting link between the north and the south of this continent, but which were once the very centre, or rather the only theatre, of a truly American, that is to say indigenous, development and civilization; in other words, I shall speak of Central America as it was at the time of its discovery and conquest by the Spaniards.

The history and condition of those American nations which we must consider as being, at that time, in possession of a civilization of their own, is apt not only to engage the curiosity of those who chance to inhabit the same continent : it is also of high importance for the study of the natural history of man in general, not only on account of the specific peculiarity of the physical and meteorological conditions, which are in every case powerful factors in shaping man and society, but for another and still weightier reason which I have already touched upon ; for, whatever may be believed with regard to an early connection between the Old World and the New, and with regard to first impulses and ideas possibly received by the former inhabitants of America from abroad, we are obliged to admit that their development, individually and as a whole, has had its course without being further influenced by foreign elements. In this point will be found a striking difference from the developments of civilization in the Old World ; and ethnology, as understood to-day, that is to say, the natural history of man, the physiology and psychology of human communities, would derive valuable advantage from the study of ancient American civilization—would, if we were better acquainted with its features. But our knowledge, in this respect, is still very limited, and opinions differ widely as to the degree of civilization attained by the more highly developed nations of America. The reason for this is to be found in two facts—first, the disappearance of that ancient civilization itself, brought about by the Spanish conquest ; and, secondly, the insufficiency of, and the contradictions in, the reports given by the conquerors.

This is not meant for a reproach ; it is easily understood, if, in considering the history of Spanish conquest in America, we take into account the leading ideas of the time and the conditions in which the conquerors found themselves placed. The Spanish adventurers and their followers who began the work of conquest, were not bent upon scientific researches ; the subjugation of the natives was their nearest aim, and the thirst for gold their only motive. Once in possession of the country, they established themselves in their *encomiendas* and made the Indians work for them in the fields and mines. And their treatment of the natives was so cruel and reckless that the conquered race soon became considerably reduced in number ; nay, in some localities they were entirely extinguished in less than half a century. The reigning families among the Indians, the priests, the men of higher attainments and greater influence, either became

Spaniards, assimilating themselves to their conquerors in customs and language and thought, or they were mercilessly persecuted and destroyed. The want of laboring hands soon led to kidnapping, and slave-trading expeditions by land and water; and many peaceful and laborious tribes were either driven from their houses and fields to the woods and mountains, or captured and carried away to perish abroad. It was of no avail that, year after year, the Spanish monarchs made wise and humane laws for the protection of the Indians. The crown was not powerful enough to enforce them in these remote colonies and to stop the destruction of the conquered race. Thus the ancient civilization disappeared soon after the conquest. But not even its memory was left to the Indians; in their sciences and arts, as well as in their religious rites and notions, the Spanish missionaries saw nothing but the work of the Devil. To his vile arts they attributed even the diversity of aboriginal languages, simply because it was an obstacle to their missionary work, and they taught the Indians to shun even the recollections of the past as a snare in which the eternal fiend might catch them. Not only their idols, therefore, and the implements of their former rites, but also their painted records, were destroyed by the fanaticism of the time, and we read with painful interest the reports of the solemn burning of hundreds of precious manuscripts by the bishops of Mexico and Yucatan.

Under these circumstances, it cannot surprise us that to-day we look in vain to the Indians themselves for information about their condition more than three hundred years ago, and that our only sources are the records of the early Spanish writers, who either were themselves present at the events and incidents of the conquest, or who had their information from eye-witnesses. Of such works we possess, indeed, a considerable number, but we encounter great difficulties in handling them critically. We do not in all cases feel sure of the veracity of the writer or of his ability to form an exact judgment, particularly when we find serious contradictions and incongruities, or an evident tendency of a dogmatic or polemic character. Even the works of writers of Indian blood, treating of the early history and traditions of their nation, must fail to inspire confidence, when we consider that, being born after the conquest, they receive their information from the second or third hand, and when we find grave contradictions, relating to facts as well as to dates, not only in different authors of the same nation and period, but also in different works of the same author. In examining carefully the interrogatories conducted by interpreters for the purpose of extracting

information of a certain kind, we are led to suspect that many a word or idea was suggested to the Indian just as the interrogator had brought it with him ready-made from home. It is intelligible enough that the authors of that period, with their orthodox and half scholastic tendencies, did not care to receive the new impressions simply as they offered themselves, but rather chose interpreting them according to their own old formulas and analogies. A striking instance of this method is presented by the Spanish grammarians, who, in treating the aboriginal languages, are particularly bent upon finding similarities or concordances with the Spanish or Latin grammar, and, if they do not find them, frequently invent them. Now, differing appreciation of those early writings has led to the most contradictory opinions regarding the early history and the degree of civilization of the native races of Mexico and Central America; and there is little hope that the veil of mystery which hangs over these matters will ever be lifted with the help of those so called historical records alone.

Fortunately other means are left. It was suggested by Humboldt, half a century ago, that more light on this subject is likely to be elicited through the examination and comparison of what palpably remains of the ancient nations, than from dubious traditions, or a still more precarious speculation. And such palpable remains we have in their antiquities and in their language. It is not too much to hope that these two branches of modern ethnological science, archæology and linguistics, will furnish us the means for reading, with a positive result, those records of the early Spanish authors, and that they will help us to a better understanding of the early history of this continent.

From this point of view I have, for a number of years, made researches into the ethnology, and particularly into the native languages of those parts of Central America and South-eastern Mexico, which, by their magnificent ruins, are shown to have been the seat of the highest pre-Columbian civilization of our continent. During five expeditions, of several years' duration each, I successively have made myself at home in Yucatan, Tabasco, Peten, Chiapas, Nicaragua and Guatemala. My principal object has been the study of the Maya language, and of the languages and dialects which, with the Maya, constitute one of the most remarkable linguistic groups of America. All these languages (with the exception of one that belongs to the coast of the State of Vera Cruz) are comprised within the area between the meridians of Tehuantepec and Fonseca bay, a

tract of land marked by those marvelous edifices for the faithful description and delineation of which we are indebted to the late John Lloyd Stephens and Mr. Catherwood. I took the same opportunity to draw into the range of my observation the other languages spoken in the same geographical districts, and to investigate the antiquities of the country. I am thus enabled to show how such linguistic and archæological studies, even when carried out on a small scale, may assist us in obtaining a basis for a sound, critical examination of those ancient Spanish writers, which, for want of better material, we call our "sources," helping us either to confirm and prove, or to refute their assertions; and how they may give us the means to elicit new facts, and to clear up obscure points concerning the relationship or early connections between the native nations.

The group of Maya nations comprises sixteen sections or tribes, fifteen of which form, also, a geographical unit. They occupy the peninsula of Yucatan, and extend over the mainland, approaching in Soconusco the shores of the Pacific. The fact that the Mayas possessed a long coast-line, suggests the idea that they may have been a seafaring nation, and this we find confirmed by the accounts of the earliest discoverers, who met their trading canoes; we have another proof for it in the circumstance of ships being depicted on the walls of a room in the ball-house at Chichen-Itza; it has further been pointed out, by Mr. Valentini, that the sites of the more important ones among ancient edifices or ruins are near bays and inlets, which would also tend to make it probable that those who built them were used to water-communications; it might even indicate the direction in which these people had entered the country, supposing they were not indigenous.

The languages of the Maya family are more or less affiliated amongst each other, some so near that we are rather inclined to consider them as mere dialects. The others differ in about the same degree as, for example, French, Spanish and Italian; a great number of radicals are common to them; others are distinguished only by a constant permutation of certain letters; while in others again the variation is very marked. The same happens with regard to grammatical and syntactical features: in many they are identical; in others they differ more or less. As an example of identity, we have, in all these languages, two possessive pronouns, one for words beginning with a vowel and another for words beginning with a consonant. An instance of diversity is the formation of the plural number, which takes four different forms; prefix, suffix, reduplica-

tion and circumlocution—the latter by means of an adverb signifying “many” or “some.”

The Maya language proper (*Mayathan*) is spoken through the whole peninsula of Yucatan, the ancient name of which was Maya. It is the purest and, at present, the most highly developed of all the languages of the family, and is used not only by the Indians, but also by the greater part of the white and mestizo population; in the interior of Yucatan I have met with white families who did not understand one word of Spanish. The Maya language is likewise generally used in writing and in printing books of instruction and devotion.

The Chontal of Tabasco, together with the Tzental and the Zotzil of Chiapas (both showing only dialectical variations), form a group to the west of the Maya proper. The name “Chontal” is not the original name, it being a general observation that the name of tribes and languages, as they stand at present, are, in most cases, not the original ones. *Chontalli* is a Nahuatl (Mexican) word, and means “stranger”—a foreigner. It is almost synonymous with *popoluca*, a word of the same language, the signification of which is *bárbaro*, “of another nation and language,” or *bozal*, which means “of rough and uncouth speech.” We find both names applied to different tribes and languages in different places of Central America and Mexico, but always in the neighborhood of people of the Nahuatl tongue, who, therefore, thus denominated any people of another language. The Chontal of the Mexican State of Guerrero is supposed to be extinguished; and of the language of the Chontales in the State of Oaxaca we know nothing. But the Chontal of Honduras, called to-day Popoluca, is a language by itself, not at all affiliated to the Chontal of Tabasco, which is undoubtedly of the Maya stock. On the other hand, the Popoluca of the State of Puebla is a dialect of the Mixteco language; the Popoluca of the State of Vera Cruz, in the northern part of the Isthmus of Tehuantepec, is a dialect of the Mixe, which again belongs to an entirely different family; the so-called Popoluca of Guatemala is pure Cakchiquel, though not in the form in which it was presented to the Academy of Vienna; while the Popoluca of Salvador is not yet known. It is a grave error to consider all these different Chontales and all the Popolucas as scattered parts of the same tribe, as has been somewhere asserted with a certain emphasis in pretended refutation of E. G. Squier, who, long before the conclusive proofs were found, had, with his admirable intuitive perception of the truth, hit the right point, here as in

many other instances, by guessing. It is generally believed, though by no means certain, that the Chontal Indians now inhabiting this part of Tabasco are the same Indians against whom Cortes, when on the exploring expedition which led to the conquest of Mexico, fought and won his first battles. The victory obtained here enabled him to enter the great town of Centla, where, half by force, half by persuasion, he succeeded in converting the natives to the Catholic religion. This part of the Gulf coast, however, having been entirely abandoned long ago, in consequence of the inroads made by the filibusters infesting those waters, and repeopled only during the first twenty years of this century by Indians from the interior, we find among these latter Chontal Indians no memory of the past, not even any local geographical names, which have been carefully preserved everywhere else, and are of great assistance in tracing the early migrations of the nations and the routes of the conquering Spaniards. It was by mere chance that, in the year 1869, I discovered the site of ancient Centla, buried in the thick and fever-haunted forests of the marshy coast, and unknown until then to the Indians themselves. In the course of the excavations which I caused to be made, antiquities of a curious and interesting character were laid bare. Prominent among these ruins, and presenting a peculiar feature of workmanship, are the so-called teocallis or mounds, which here are built of earth and covered at the top and on the sides with a thick layer of mortar, in imitation of stone-work. On one of these mounds I found not only the sides and the platform, but even two flights of stairs constructed of the same apparently fragile, but yet enduring material. One of the latter was perfectly well preserved. I likewise saw clay figures of animals, covered with a similar coating of mortar or plaster, thus imitating sculptured stone and retaining traces of having been painted in various colors. The reason for this singular use of cement probably is, that in the alluvial soil of this coast no stones occur within a distance of fifty miles and more from the sea-shore; stone implements, such as axes, chisels, grinding-stones, obsidian flakes, etc., which occasionally are also found, can have been introduced only by trade. The pottery and the idols made of terra-cotta show a high degree of perfection. Regarding the period down to which such earthenware was made, a broken vase, disinterred from one of the mounds in my presence, may give a clue. Its two handles represent Spaniards, with their European features, beard, Catalonian cap and *polainas*, or gaiters.

Another language of the Maya family is the Chol or Echolchi

(“language of the corn planters”), the nearest relative of the Maya proper. It was and still is spoken in some villages in the neighborhood of the ruins of Palenque, by a few old Indian families in the towns of Santo Domingo and Tenosique, and by the western branch of the Lacandones. It has been asserted by Ximenes, and repeated by Brasseur, that the Chorti, which is spoken in the neighborhood of Copan, is identical with the Chol language. This is not proved yet, but considering the similarity in the structure and ornamentation of edifices and in the sculptures found on both these ruin-districts (Palenque and Ocosingo in Chiapas the one, and Copan and Quirigua, on both sides of the boundary line between Honduras and Guatemala, the others), this fact, if once established, would be of very great importance. As bearing upon the subject, and in eventual support of the suppositions which such identity of language would suggest, I may refer to the report of the Dominican missionaries who first visited the country situated between the said districts, and generally called Acallan, Chol and Manche. These writers give us the names of a number of tribes which are also said to have spoken the Chol language, thus establishing a linguistic link between these two districts, while an archæological connection may be shown by further examination, and by edifices and ruins which recently have been discovered on two spots of a line drawn on the map between Palenque and Copan. Closely related to the Chol is the Kekchi language, still spoken in the Alta Verapaz. The so-called Cacchi or Caechi, heard in the eastern part of the same province, is merely a dialect of the Kekchi, with rather slight differences. The original name of this tribe or language is not known. Kekchi, which means “upper language,” and Kakchi, which means “lower language,” seem to be accidental and more modern denominations taken from the relative elevation of the districts in which they are spoken. Another member of this group is the Pokomchi, spoken in the southern part of the Verapaz; and nearly allied to it, is the Pokoman language, still found in several localities in the south of Guatemala.

In the western part of Verapaz, and still further to the south-west, we find the Kiche group, one of the most important of the Maya family. It comprises the three so-called “metropolitan languages” of Guatemala; Kiche, Cakchiquel and Tzutuhil, and the Ixil, nearly affiliated to Kiche proper. Cakchiquel is the name of the tribe on whose soil the Spaniards first established themselves, and the language of the same name is still extensively spoken in the vicinity

and to the west of the capital. A mere dialect of it is the Tzutuhil or Achi, on the shores of the Lake of Atitan.

Berween this Kiche group of Guatemala and the Tzental group of Mexico, we find, on both sides of the boundary line between the two republics, three languages, of which I have been able, so far, to examine only one, the Chaneabal, in the district of Comitan, in Chiapas (Mexico). It undoubtedly belongs to the Maya family, but is distinguished by copious admixtures from other languages of the neighboring countries. This is, indeed, indicated already by the name, *Chaneabal*, meaning "four languages." On the Guatemala side of the boundary line are the Mames, said to have formerly extended over the greater part of Soconusco, and another tribe of the name of Pokomanes. These latter are called *Chujes* by the people of Chiapas, probably on account of the calabashes which, on their visits to the Chiapas fairs, they take along, having to pass through the wide and waterless slopes of the Cuchumatan mountains. It remains to be seen whether they speak the same language as the tribe of the same name mentioned above, or if they have an independent language.

All these languages of the Maya family belong to the same geographical division. But far away, at the northern end of the Mexican State of Vera Cruz, ascending the Panuco river to its head-waters, and extending into the State of San Luis Potosi, we have another tribe, not yet spoken of, the Huaxtecas, or, as early authors call them, Cuextecas. It was proved long ago that, linguistically, they are of the same stock as the people of the Maya family, and my own investigations have convinced me that, of the different languages of this family examined by myself, they are nearest related to the Tzental. Their tradition, however, although pointing to their arrival by sea, gives no clue to an historical connection; it may be left to comparative archæology to throw light on this highly important but still very obscure question.

With these Huaxtecas we close our review of the Maya nations. We have seen how the linguistic part of the ethnological study of this group, though unfinished yet, and only a weak beginning of what may be done in the future, has helped already to determine the extent and limits, the membership, of the family, and to establish within it groups according to the degree of relationship. It will assist us also in finding a clue to the relative age of the several groups, and to the nature of their relationship, whether descendant or collateral; not to mention the possible gains for

comparative linguistics in general and American linguistics in particular.

Far away from the seats of the Mayas, at the other extremity of Central America, are the faint traces of another civilization, which, however, was already near its extinction when the Spaniards first took possession of the famous *Castilla del Oro*; it belonged to the Coiba or Cueva nation, whose wealth and refined habits had attracted the attention of the conquerors since the fourth voyage of Columbus. The early writers describe them as prominent in general culture and certain technical arts. Though broken up at that time into a great number of smaller communities, they were still united by the same language, whose domain stretched from the Gulf of Urraba across the continent to the shores of the Pacific, and along the Atlantic coast as far as the Gulf of Aburema, afterwards called Chiriqui. A comparison of the fragments of this language, preserved in the relations of the first explorers of the country, with the idioms spoken to-day by the numerous tribes scattered along the coast and the navigable rivers, has shown the latter to be the descendants of the Coiba nation. They are relapsed into a state of relative barbarity, but there is evidence and proof of their former state of high civilization, not only in the early reports, but also in the frequent occurrence among them of specimens of an exquisite workmanship in stone and gold. The art which they possessed of working the precious metal in two different ways, the one by soldering gold wires drawn out into the finest threads upon thin hammered plates of the same metal (the plate giving the general shape and outline, the wire adding bulk, shade and design), the other by founding and casting hollow figures, excites the astonishment of the most skilled jewelers of to-day. These gold figures have been found, in great number and variety, in the so called guacas of Chiriqui and its neighborhood. We are still in the dark with regard to the connection which may once have existed between the Coibas and their neighbors, the Nicaraguan nations to the north, the Chibchas to the south. Their objects of art would seem to point both ways. Perhaps the archæological and linguistic investigations actually going on in the valley of the Cauca and at the head waters of the Magdalena, may afford some more light on the subject than has been, so far, afforded by recent corresponding researches in Costa Rica and Nicaragua.

It is in this latter country, midway between the Coiba and the Maya districts, that we have to place the third centre of civilization

—the Chorotegas, who, at the time of the conquest, occupied three separate sections of the shores of the Pacific Ocean. It has been asserted by the early writers that this nation was closely related to one of the more prominent tribes of the Mexican State of Chiapas, the very tribe, in fact, from which that State derives its name, though slightly corrupted; the Chapanecos, thus called after their holy bird, the red macaw, which, in their language, is called *chapa*. The connection between the Chapanecos and the Chorotegas is differently accounted for: according to a mere assertion by Remesal, the Chapanecos had come from Nicaragua, while Torquemada tells us, rather in detail, of a migration in the opposite direction. From the comparison of the somewhat obscure traditions, preserved principally by Oviedo, Torquemada and Herrera, it seems to result that the people in question first inhabited the ancient city of Cholula, on the famous table-lands of Mexico, called Anahuac, and that from this city they were named Cholutecas, or, with a corruption, Chorotegas; that afterwards, being pressed by their neighbors, they emigrated to the south-east and settled in the deserts between Tehuantepec and Soconusco, and that there a division took place, in consequence of which one section occupied the coast of Soconusco, the other advancing toward the mountains. This latter part succeeded in extending their dominion over the interior, and were found there by the invading Spaniards, under the name of Chapanecos; while those who had established themselves in Soconusco, attacked by their old enemies, migrated still further to the south, and finally settled on the strip of land between the Nicaraguan lakes and the Pacific, occupying the coast from Fonseca Bay to Nicoya. But even here they were not destined to remain unmolested. Another invasion by a tribe of the Nahuatl stock took place, and this time the invaders, wedging themselves right into their midst, got possession, and that permanently, of what is now the department of Rivas, in Nicaragua, from which they likewise peopled the islands in the great lake. Thus the Spaniards, on entering the present State of Nicaragua from Nicoya Bay, and then marching through the country, came in contact first with the southern section of the Chorotegas, or Mangues, as they were also called; then, with a Nahuatl tribe, whose capital and king are mentioned as bearing the name of Nicarao, and after these again with Chorotegas or Mangues, who, however, did not occupy the whole tract of land up to the Bay of Fonseca, but were again separated from the Chorotegas on the shores of that bay by another foreign tribe, called Maribios. Thus we obtain the three

sections into which the Chorotegas of Nicaragua were divided at the time of the conquest.

Now, their language seemed to me an object worthy of having some special attention bestowed upon it—not so much for its own sake, but in order that a better understanding might be arrived at of the ethnological features of Nicaragua, which, on account of an insufficient acquaintance with its actual condition as well as with the early writers, and of the rather precarious speculations and conjectures of modern authors based upon such scanty knowledge, have become greatly confused. Having studied the Chapanecan language on a former expedition, and wishing to compare it with the Chorotegan, I visited Nicaragua in the year 1874. I found that the Indian population near the Nicoya and the Fonseca bays had entirely disappeared, and in both districts only met with some local names belonging to the Chorotegan language. In the third district, also, where descendants of the old stock are still living in twelve villages around the lakes of Masaya and Apoyo, I was informed that no other vestiges of the old idiom were left, the inhabitants speaking exclusively the Spanish language. I had, however, the good luck to ferret out some old people who still remembered words and phrases they had heard in their childhood ; and I was enabled to collect material sufficient to convince myself and others of the identity of this Mangue or Chorotegan idiom with the Chapanecan language in Mexico. I was not a moment too early in obtaining this information, for the greater number of my informants died while I was staying in the country. I still hope that, with the knowledge of the Chorotegan thus gained in Nicaragua and Chiapas, it may be possible to trace their history and descent backwards to one of the nations that were living in Anahuac in the earliest times of which our records speak. This is a point where archæology must step in. Large collections of antiquities, made lately in Nicaragua for the Berlin museum by myself, and for the Smithsonian Institute by Dr. Flint and Mr. Bransford, together with those already made or yet to be made in the present abodes of the Chapanecos and in the successive dwelling places of one other Mexican nation, whose primitive connections with the Chorotegas we might be led to surmise, may bring us to important conclusions. Two other points I will mention in this connection as being of great archæological interest—I mean the reported halting places of the Chorotegas on their way from Soconusco to Nicaragua. Considering the character of Mexican migrations in general, it seems prob-

able that the duration of each halt stretched over at least one generation, which, therefore, was sure to leave its traces behind. And it is a well-known fact, that near both places antiquities are found essentially differing from those belonging either to the neighboring nations in the north (Cakchiquels and Kiches), or to the Nahuatl tribes, which, as they extended along the coast at the time of the conquest, so now exist in a large number of villages in Soconusco, Guatemala and Salvador. Prominent among these relics of the past are numerous sculptured slabs and stoneheads which were first discovered some fifteen years ago, among the debris of ruined edifices in the department of Escuintla, and, after a long oblivion, have now been disinterred again and secured for the Berlin museum by Professor Bastian. I hope to find still others of these documents of a remote but interesting period of American history in the course of an exploration which I intend making soon in the Guatemalan coast-region, though more for the sake of completing the linguistic researches with which I am principally concerned.

Thus linguistic science has begun to invade the field of American ethnology; I have only to ask that what it can do there may not be measured by the shortcomings of my labors, commenced and carried on as they were in almost entire isolation. And let it not be forgotten that this science is as little bound as it is qualified to perform the whole task alone; archaeology must lend a helping hand. But archaeology is, on American soil, in its infancy as yet. Before any definite results can be obtained, the materials for archaeological research have to be brought together and made accessible and available. We must have museums, in which the plastic remains of the ancient American civilizations, either original or in faithful imitations, shall, in as large numbers as possible, be collected and duly grouped and labeled according to the place and circumstances of their discovery.

You build palaces for the reception of whatever bears upon the natural history of plants and animals; is it too much to solicit an equal share of the same praiseworthy zeal for the investigation of the natural history of Man, of Early Man in America? And it is the more urgently asked for, it is the more necessary, as the elements, and ignorance, and the progress of civilization itself, tend daily more to destroy what little is left of the past of our continent.

So let me conclude with a wish and a hope that, with this second century of our country, may begin the first of a rational and fruit-

ful progress in this particular, as in many another branch of scientific development.

[During the reading of Dr. Berendt's paper, Dom Pedro, the Emperor of Brazil, entered with the empress, accompanied by Donna Josephina da Fonseca, Maid of Honor, Donna Emilia de Carvalho Borges, wife of the Brazilian Minister, and the emperor's suite; M. Carvalho Borges, the Brazilian Minister, Chamberlain Visconde do Bom Retiro, Admiral Lemare, Dr. Souza Fontes, and the emperor's secretary, A. T. De Macedo. Upon the invitation of the president, the emperor and suite took a seat upon the platform.]

After the reading of Dr. Berendt's paper, the president said—

We had anticipated the pleasure to-night of meeting Dr. Nordenskjöld, the distinguished Swedish arctic explorer, who has added to his previous explorations and scientific labors by his recent exploration of the River Yenissei, enriching geographical science by his very interesting and important account of the countries through which this river flows in its course to the Arctic. It was the intention of Dr. Nordenskjöld to have been present at our meeting, but he was compelled to leave two days ago for Europe, that he might be in time for the starting of the new expedition to the Arctic, planned by him, and of which he is to take charge.

The president then read the following letter from Dr. Nordenskjöld—

LETTER OF PROF. NORDENSKJÖLD.

DEAR SIR.— \* \* \* I am very sorry not to be able to be present at the meeting of the American Geographical Society on Tuesday, the tenth, which would not only be a special honor to me, but would have given me an opportunity to make acquaintance with the leading geographical men of America. But I am compelled to start for Europe by the next steamer, that I may be able to meet in due time my steamer, "The Ymer," with which it is my design to go this autumn to the Yenissei and the Obi. This new expedition, which is at the expense of Oscar Dickson and Alexander Sibiriakoff, has for its object to develop still further the researches and discoveries of the last year in respect to the navigability of the large Siberian rivers.

Very respectfully yours,

A. E. NORDENSKJÖLD.

Although, said the president, we are not to have the satisfaction

of meeting Dr. Nordenskjöld, we have the pleasure of having with us our honorary member, Dr. Petermann, than whom no one not an actual explorer has been more fully identified with the progress of geographical science for the last quarter of a century. Apart from his valuable labors as a cartographer, the world has been chiefly indebted to him for the publication and intelligent exposition of what is going on from time to time in the great field of geographical discovery. To him the scientific travelers and explorers in every part of the world have been indebted for an early account and due appreciation of their labors, and I avail myself of this occasion to make my own especial acknowledgment of the aid I have derived from his publications, in being enabled at the close of each year to lay before the Society a summary account of the geographical work of the world. But the pleasant duty of welcoming and doing honor to Dr. Petermann, I feel will be more fitly discharged by a distinguished member of this Society, eminent not only as an extensive traveler, but as one of the chief ornaments of American literature—Mr. Bayard Taylor [loud applause]—whom I shall now ask to unite with me in giving expression to the gratification of the Society at meeting Dr. Petermann.

Mr. Taylor then rose and spoke as follows :

#### BAYARD TAYLOR'S REMARKS.

Mr. President, Ladies and Gentlemen, I have been requested, as a member of this Society, to assume the office of welcoming here to-night Dr. August Petermann, the distinguished German geographer. I accept the duty with the greater satisfaction, because I have visited Dr. Petermann at the scene of his labors from time to time during the last twenty years. I know the character and importance of this work; and the simple description of it obviates the necessity of any special eulogium. In geographical science Dr. Petermann is the worthy successor of Alexander von Humboldt and Karl Ritter, although he has made no explorations and published no narratives of travel. But he has done what was scarcely possible in their day: he has developed a new branch of activity in this great field of knowledge. I might appropriately call it the organization of discovery. From the moment when he was called to assist Perthes, the famous geographical publisher, at Gotha, he has watched every possible inroad of civilized man into the unexplored territory

of the globe. He has come to the aid of every chance unprepared traveler—drawn his charts for him, solved his guesses and corrected his rude calculations. He has guided the selected explorer, equipped him in advance, pointed out the path of achievement, and taught him how to secure the best scientific results of his daring. Seated in his office at Gotha, he has organized the conquest of Africa, of Central Asia, and the Arctic regions, cheering one hero on the same path where another fell before him. In this age of great explorations, the advantages of that central bureau of exact knowledge which Dr. Petermann has created, need no explanation from me. But inasmuch as I have personally seen so much of the duration, the extent, and the self-sacrificing character of his labors, I am glad to express, as an old friend, my heartiest concurrence in the welcome and recognition which he receives here to-night.

Let me venture to say a few words more, and pardon me if I seem to stray a little beyond the scope of this evening's meeting. Since the time of Herodotus geography and literature have always had an intimate relation. The clear narrative style and power of description which are indispensable to the traveler belong to literary art; the domains of the two continually overlap; and if I confound them now it is because I wish to speak both as a member of the Geographical Society and as a humble member of the guild of authors. The other distinguished guest of this evening, who is so soon to leave us, claims our acknowledgment not only because he has favored the explorations of Herndon, Gibbon and Orton, and assisted the scientific labors of Agassiz, Hartt, and others, but also because he has followed, with the interest of that lofty nature which is affected by all that affects humanity, the literary development of our country. With an industry that puts our national energy to shame, and a habit of almost more than republican simplicity, he has studied our geography, our industry and our institutions; but he has also found time to make the personal acquaintance, as he already knew the works, of our poets, Bryant, Longfellow, Whittier and Lowell. Such a hearty and intelligent sympathy with the highest interests of our national life demands an equally cordial recognition. I am sure that no distinguished stranger ever came among us, who, at the end of three months, seemed so little of a stranger and so much of a friend to the whole American people, as Dom Pedro II. of Brazil. We can give him no better God-speed, now as he leaves our shores, than the lines which our psalmist,

Whittier, addressed to him after the decree abolishing slavery in his empire :

And thou, great-hearted ruler, through whose mouth  
The word of God is said  
Once more, " Let there be Light ! "—Son of the South,  
Lift up thy honored head !  
Wear unshamed a crown by thy desert  
More than by birth thy own.  
Careless of watch and ward, thou art begirt  
By grateful hearts alone.  
The moated wall and battle-ship may fail,  
But safe shall justice prove :  
Stronger than greaves of brass or iron mail  
The panoply of love !

At the conclusion of Mr. Taylor's remarks, the president introduced Dr. Petermann, who was received with loud applause.

#### DR. PETERMANN'S REMARKS.

When I had the honor of being invited to this meeting, it was suggested to me by your president, if not to read a paper, to give some remarks containing the impressions of my visits to this country. Most willing as I do feel to respond to this suggestion on the one hand, I am most reluctant to do so on the other, for I have been in this country too short a time to make any other but very hasty observations—little more than three weeks, half of which time has been devoted to the Centennial—and the impressions of what I have seen in this short time have been so overwhelming that I have not had time, as yet, to collect, as it were, my thoughts about them.

On this very day, having proceeded from Boston to Albany, I intended going on to Niagara, as I have to return to Europe next Saturday; but in order to follow the kind invitation to attend this meeting, I stopped at Albany to come down the Hudson, on purpose to be here this evening; and being here now, I offer what I request you to take as the very superficial remarks of a tourist who not only felt the overwhelming nature of what he saw, but also the depressing influence of continued hot weather, such as I have never experienced before for any length of time.

Ladies and gentlemen, I am altogether most happy that I have lived to see this great country and people. From printed descriptions and personal communications, I had imagined I knew something of America and Americans, but on coming here I have found that I knew very little, and that one gets best at the full truth when one comes to see and judge for one's self.

I knew this to be a great country and a great people, but all my expectations have been surpassed and agreeably exceeded.

In Europe, one is apt to think that many matters in this country are as yet only half finished. It may be true that this is a very young country, that its occupation and settlement have not long since only been commenced, that this very big country requires, perhaps, hundreds of millions of people more before it can be said to be fairly inhabited, somewhat after the fashion of European countries. Even on the line of your largest cities—from Washington to Boston—only the northern half of it gave me the impression of being fairly occupied, in the European sense.

But just for this very reason, all I have seen on this line has filled me with admiration and struck me as being at the head of any human progress and culture that may be found anywhere else on the globe. Among European countries, I know England pretty well, but on coming here I find many things to approve and to admire that I never saw even in London.

Of course the old countries have many things handed down to them from generations past which they cannot easily or quickly get rid of, even if they would—for example, the narrow, crooked, unwholesome streets of their towns. Cities with great means like Paris, Vienna and others, have done much to take down old streets and build up wider ones; still, in general, they must keep what they got. America has had the advantage of building up everything anew, and it has done this, generally, in an enlightened spirit.

Even a very small tour like mine is sufficient to convince that this is by nature a highly favored and rich country. What has made Europe, the smallest of the quarters of the globe, the most important—a favored climate and an indented coast-line—is also found in this country. This Atlantic coast I have visited ranges with Italy, Greece, France, Germany, England as to the climate. In Boston greeted my eyes in great perfection fruits and products that I am accustomed to see in Germany, while I missed them further south. But so extensive is this country that from Maine to Florida and from Washington to Mexico almost all different climes congenial to civilized man are found.

The natural configuration of your Atlantic shore reminds one of the indentations of the most blessed lands of antiquity and modern time; everywhere the sea and its deep creeks and tide-rivers stretch far into the land and make communication with the rest of the

world easy. Thus, for example, the Chesapeake bay and the Patapsco, the Delaware bay and river, the New York bay, the Hudson river, the Long Island sound, the Massachusetts bay, and others, are the natural and favored highways to your great cities of Washington, Baltimore, Philadelphia, New York, Boston.

Only such cities that have a similar good position by sea and by land as these will be the cities of the future. I was much impressed by this great feature of your country, by visiting these cities thus favored by their natural position.

But favored as the sites are on which these cities stand, it is much more wonderful what has been done by human energy and perseverance in building them up within the short time of about 100 years—the progress from the very first settlement, another 100 years back, having been but slow. I expected to find many houses such as first settlers erect them, but I found magnificent cities, with fine palaces, elaborate structures, great public buildings, and nice comfortable family houses, all of them built either of the finest and most costly materials—marble and granite—or of a variety of sand-stone and bricks, which latter, for fine quality, as in Baltimore, are unsurpassed elsewhere.

In that magnificent marble building, the City Hall of Baltimore, in the library, an interesting drawing was shown me of what Baltimore was a little more than 100 years ago—a number of small farm-houses such as yet might be seen in the country. Now, after sailing up the far-stretching Chesapeake bay, with its flat lonely shores that scarcely betray human habitations, it is most striking all at once to find one's self before an immense city, with all the features of rapid American progress, and certainly one of the great centers of commerce and industry.

I inspected some of the schools of Baltimore, and was exceedingly gratified to find in what enlightened spirit the education of this country is conducted and administered, and what large means are devoted to it. When I consider that what took me half a day to go over were only two out of about 150,000 schools you have, it strikes me that education in this country rests on a most extensive basis, ranking with any other in the world.

The foundation of John Hopkins' University, where one single private individual devoted the sum of three and a-half millions of dollars, and the Peabody Institute, are sufficient proofs that all the highest interests of life are well taken care of in this country, as is further shown in the history of many similar magnificent donations by others of your wealthy citizens.

A most pleasing impression I had by the acquaintance with Druid Hill park, the natural and artificial beauties of which can vie with those of any city park in Europe. In all your cities I have found these fine parks, as well as reservoirs occupying the highest elevations of the ground, supplying your cities with an abundance of fresh water. Both are highly commendable features in the life of a nation; parks and squares elevating and refreshing the mind, fresh water being the chief requirement for family and household purity and cleanliness—and cleanliness is next to godliness.

The kind and honoring reception I had in Baltimore, when I thought of landing entirely unknown, showed me how, even in that city of commerce and industry, the literature and scientific endeavors of Europe are well known and appreciated.

Washington, away from the noisy hum of a great port and center of commerce, seemed to me well adapted as the seat of the political capital and government of this country. It is built on a most magnificent plan, and the width of its streets, the extent of its squares and parks, surpass those of any other city in the world.

Here in Washington the best opportunities were in a most obliging manner accorded me in inspecting the various public departments, of which those connected with the geography and cartography of the country engaged my especial interest.

From my geographical pursuits I had long known the excellence and merit of the labors of the United States, both public and private, in this field, all over the world, in North and South America, in Africa and Asia, in the Atlantic and Pacific, in the Arctic and Antarctic regions. More and more of late years the great surveying operations of the far West have prominently and permanently engaged the attention of the whole scientific world. In Washington I had the gratification of making the personal acquaintance of a great number of these famous explorers and surveyors, the Haydens, Powells, Wheelers and others, with their effective staffs of excellent hard-working men of science, and I saw more than is possible in Europe of the vast results of their great and persevering labors, for only a small portion of these can be published; the splendid and extensive collections in all branches of natural history, as well as the vast collections of excellent photographs, must be seen to be appreciated. They are at present partly in the government building of the Centennial at Philadelphia, and afford great interest and instruction, which will increase at future times, when much of it may have become relics of times and things gone by.

It was just in the exciting time of the appropriations of Congress that I stayed at Washington—appropriations on which also depended the extent of labor in these departments for the ensuing year. With regret I had to observe that this important part of the public service of the United States is from year to year in danger of being stinted or cut off by these yearly appropriations of Congress, and if I can find fault with anything I have seen in the country, it is this. For the requirements of science mere politicians cannot be expected to have much feeling and sympathy, but every civilized country requires a proper survey of its territories for a multitude of purposes, and members of Congress wanting to stint or cut off the small means required for this service simply would degrade the character of this great country, and injure and retard its progress. All the surveys and explorations made hitherto by the government of this country have cost but very little time and money as compared with those of European countries.

While at Washington I had the honor to be invited to Annapolis to see the Naval Academy, and the proceedings of the festive day when the diplomas were handed to the cadets—a most delightful and instructive day. When I learned there that only one man-of-war is in service now, it struck me how essentially a country of peace this mighty country is.

Philadelphia is a wonderful instance of the marvelous growth of this country. That it is the largest city as to area in the United States, made itself felt to the visitors of the Centennial who had to go from the city to the exposition or *vice versa*, because the mere time for this by the street-cars took one hour, and sometimes, when the traffic was very dense, two hours.

The Centennial is a grand achievement, eclipsing all former expositions of that kind in Europe. Here can be clearly seen what position the United States holds in the culture of the world, in manufactures and industry, especially in machinery, as well as in science and art. Even in art, where in the opinion of many it had been considered that this country could not have had time enough to achieve as much as to rank with famous art countries of Europe, it was clearly shown that this country had made of late immense progress.

I congratulate myself with having landed at Baltimore, and thus proceeding step by step to the commercial metropolis of this country, New York. This city, and especially its Broadway, appears to me a kind of prime meridian, where two worlds meet, the Eastern and the

Western. Spending the only evening I have been in this city as yet in the lovely walks and resting places of the Battery, my mind was filled with reveries of the future, and as to what New York might be a hundred years hence.

After a day in New York, I went on to Boston by that famous Fall River line, with its wondrous steamers, a dream of fairy-land, and enjoyed the magnificent scenery through East river and Long Island sound ; the like I have not seen in Europe.

When the country between Washington and New York appeared to me more like a park, perhaps awaiting still the hand of man for a greater density of population, the country from New York to Boston looks like a beautiful garden dotted all over with comfortable farm-houses and neat cottages, and a land highly cultivated and densely inhabited.

Boston struck me in more than one way as the link between the old and new country, between Europe and America—a point less hot and southern-like, the natural products and fruits reminding me more of Europe than the more southern cities. I was highly pleased with Boston, its fine streets, its Central Park, Boston Common, its bay and harbors. In rambling through the city, I visited Bunker Hill monument, Dorchester heights, and other points, and chanced to come to the north ferry that connects the city with the outlying parish of Chelsea ; an eminence there attracted my attention, and thither I bent my steps, thus gaining the summit of the Chelsea highlands. Here I enjoyed the grandest view I have as yet had in the United States.

It is not so obstructed as the one from Dorchester heights, and more comprehensive and pleasing than from Bunker's Hill monument. It is a kind of small Rigi, because there is an imposing, almost boundless panorama all round—a panorama which impressed me much, as it seemed to me typical of the country, its natural resources and its immense progress. Far away to the east, in a great semicircular line, stretches the Bay of Boston, Massachusetts bay, not in a smooth, monotonous line, but picturesquely broken by a most variegated outline and a great number of islands large and small, rocks, capes, straits and river lines, till no more detail is discernible to the naked eye far away in the Atlantic ocean. Islands and shore are more or less covered with houses and culture, trees and pasture ; the sea, with large and small vessels, steamboats and steam ferries ; broad sea-arms are bridged over by long bridges, on which may be seen railway trains or street-cars. The main coast-

line and the heart of Boston itself are again cut up in a most picturesque way by bays, harbors, creeks and rivers that reach inland as far as the city extends. Beyond the city, in the south, rise the Blue hills and other small ranges, heightening the effect of the magnificent picture. As in the east the sea, so in the west the city, with its spires and steeples, and domes, and monuments, and smoking chimneys, extends as far as the eye can reach, until the horizon is formed by wooded eminences, as in the south. The foreground, also, towards the city, is most beautiful, because formed of undulating ground covered with charming villas and churches, interspersed with trees. To the north, on the opposite side of the city, first comes a valley, through which a meandrous creek, the Snake river, runs, with its meadows and nice country houses; beyond this valley stretch long elevations with fine villas and trees; beyond that again higher ranges, wooded, and far to the north-east a nook of the sea, the shores and slopes of which are densely dotted over by the houses of Lynn.

I thought of the fine view of Venice from the Campanile, with its alternate parts of houses and sea-arms and canals; but these sea-arms are the shallow and muddy lagoons—the sea-arms of Boston the clear Atlantic ocean. The town parts of Venice are compact streets, artificially jammed house-masses—the parts of Boston between its varied sea-arms are properly spread out, interspersed by many trees, squares, parks and green lawns. In Venice the Lido forms a long monotonous straight line, dividing the sea from the lagoons; here a much more variegated picture of the sea, land and city, extends all around, as far as the eye can reach.

If any one wants the sea, islands and capes without end, he has it here; if any one wants a big, imposing, long-stretching city and houses, with clumps of trees and country scenery without end, he has it here also. As far as the city and its outlying and neighboring parishes extend, the sea, with its arms and creeks, and tide-rivers also extend. And all this may be viewed with comfort and ease, for on the summit of the Chelsea highlands stands a good hotel, with elegantly furnished rooms.

To-day I enjoyed the charming and even imposing scenery of the Hudson from Albany to New York, which ranks with the best of river sceneries of Europe.

In every respect my very limited tour in this country has been one of gratification to me. I have found a land of wonderful natural capabilities, and this land wonderfully raised and cultivated by its

people. I find many matters in advance of Europe, and every indication that progress will be gone on with as before. And everything I see here has the appearance of its being made for the peace and happiness of the people, and this not only for the original founders of the colony, but for every race of the earth that chooses to come here. As well as English descendants, I see here from the east representatives of all the races of Europe ; from the west, the yellow races of Eastern Asia, and, above all, in a strong proportion, the sons of the black continent.

To see and observe these black descendants in the position they occupy in this country has been to me a source of great interest and gratification. Hitherto I have been acquainted with the black races of Africa chiefly by the exploring expeditions, which all show those races more or less as occupying the lowest scale of human existence, constituting, as they do everywhere in their native land, an object of merchandize, the children being sold into slavery by their own father, the sisters by their brother, and so forth. Here in this country, and through this country, the Africans have been elevated from the position they occupy in their own land to that of a Christian, a working and industrious race, and are free members of the community, speaking the English idiom, no more a curse to themselves, but taking a useful rank among the rest of the world.

There are about 8,000,000 of families and 8,000,000 of houses in this country, so that about every family, of whatever race, occupies a house by itself to live in.

Some countries of the world are overstocked with people, others the reverse ; to the former belongs China, which could miss 100,000,000 of its 400,000,000 without so much as noticing it. Africa, again, is a great continent, full of useful and important natural products to the world, of which little, however, can be raised, for want of labor, and the slavery of its black race. There are some who, like my friend Francis Galton, in London, say : Go and take the Chinese away from China, and bring them to Africa to make that continent do better. No one, however, has as yet seriously entertained this proposal, or given it realization in any practical or extensive manner. For some time past a tide has commenced to set also from China into this country, where there is room for yet so many millions. Why should the yellow race not occupy at least the same satisfactory position to themselves and the white race as the black race does ?

This remains a question to solve in the second one hundred years of the Union ; and I wish you and this country sincerely the same progress and prosperity as has marked the first one hundred years in such a wonderful degree, that even such great problems as the change and remodeling of the nature and character of the African race have been satisfactorily solved.

To myself this short visit has been a source of much instruction and gratification ; everywhere I have only experienced kindness, and having had the honor to be invited to this meeting, it gives me sincere pleasure to express my gratitude publicly for all the kindness I have experienced.

[The president then read a very interesting letter from the Rev. Dr. Adams, upon the occasion of the meeting, and regretting his inability to be present to welcome Dom Pedro d'Alcantara and the other distinguished guests, which is not inserted, having unfortunately been lost.]

After the reading of Dr. Adams' letter, Chief Justice Daly said :

I am sure that I express the general gratification of the whole Society, at the pleasure we receive from the presence among us to-night of Dom Pedro d'Alcantara. (Loud and long continued cheering.) Though he is with us as Dom Pedro d'Alcantara, I would like, if I may take that liberty in his presence, to say a word about the Emperor of Brazil. The instances have been very few in the world's history, in which the permanent head of a great nation has united with the qualities of a ruler, the distinction of literary and scientific attainments. Many have been patrons of learning and science ; but it is something more to be, like our distinguished guest, also an investigator and a man of learning. Indeed, I can recall at this moment but one similar instance, that of Alonzo X. of Spain, surnamed "the astronomer," and "the wise ;" whose astronomical tablets, or at least those which bear his name, and which were so long in use, were said to have conferred upon him more distinction than all his battles, for he was also a warrior, and had a very troubled reign, which did not, however, prevent him from engaging largely in scientific researches. Indeed, some malicious wit of that day said that his spirit of research was so great that if he had been consulted at the creation, he would have suggested something different. Little room would be found for the indulgence of such witticisms at the present time, when the effect of all scientific investigation is to awaken a reverential spirit in contemplation of the marvelous works of creation, which, as they are gradually unfolded

by scientific discovery, but augment our wonder, and make the region of the still Unknown seem to us greater and more infinite than it appeared before. The distinction which learning and scientific labors confer is not looked for in the ruler of a State, from the numerous duties and great responsibilities incident to that high station, and that it is so exceptional must be my excuse for referring to it in the presence of Dom Pedro, in whose house or lineage, however, it seems to be hereditary; for we are told in the immortal novel of Cervantes, that when the barber and the curate were employed in devoting the whole of Don Quixote's library to the flames, they came across one book which they both agreed should be saved, because it was written by a learned king of Portugal.

In an age like ours, so marked by a wide-spread activity in every branch of science, it is of the greatest importance that the governments of the world should be in sympathy with the prevailing impulse; for the aid of governments, pecuniarily and otherwise, is necessary for the prosecution of at least some of the sciences with the breadth and comprehensiveness which have now become indispensable. This is especially so in the wide field of the science for the advancement of which this Society was organized, embracing as it does the whole surface of the globe, the land spread over it, the waters that cover it, and the air which surrounds it—a science requiring for its prosecution and exposition an enormous accumulation of details, that are to be obtained only by long-continued labors and pecuniary expenditures upon a very extensive scale. To the geographer, as well as to all who feel that scientific discovery is and must continue to be one of the great factors in the advancement of human civilization, it is of the deepest interest that the governments of the world should be fully impressed with what is due on their part to assist in the increase of scientific knowledge, and it is therefore with no ordinary feelings of respect and pleasure that we receive and welcome at our meeting a ruler who has ever sought to impress this great duty upon his own government, and to enforce it in his high position by the striking spectacle of his own example.

Col. T. Bailey Myers then rose and said:

Mr. President, I am delegated by the Council of this Society to propose the name of Dom Pedro d'Alcantara as an honorary member. It would be unnecessary to add a single word to what has been already said, but if any argument were required to show what a source of congratulation it would be in future to add so illustrious a

name, it would be the fact that that gentlemen sits with us to-night as a private citizen.

The emperor was elected by acclamation, and was welcomed with enthusiastic applause, in the midst of which he came forward, the whole audience rising and cheering vigorously. The gentlemen upon the platform remained standing while the emperor spoke as follows :

#### THE EMPEROR DOM PEDRO'S ADDRESS.

"Although sincere gratitude's voice is always eloquent, I still hesitate to utter my thoughts to the American Geographical Society for the honor it confers on me in the presence of men so prominent in geographical science, and such indefatigable explorers of a region where man, rivaling as it were with nature, feels that labor is his greatest glory and most solid base of happiness. On so solemn an occasion, however, it is my duty to express how in my country we prize geographical studies, which bring to light its elements of wealth, and secure for it—I speak as a Brazilian, but without partiality—a brilliant future and also make it useful to all nations, with which Brazil has always endeavored to maintain a cordial friendship. I trust the American Geographical Society will allow me to express here a feeling adieu to all the people of the United States, who welcomed me with so much kindness, and to explain to them at the same time how sorry I am that a motive, doubly regretable, has not permitted my remaining longer among them, to see and examine as much as I desired, notwithstanding the means employed by this great nation to overwhelm time." [Loud applause.]

Dr. I. I. Hayes, the celebrated Arctic explorer, was then introduced and spoke as follows :

#### DR. I. I. HAYES' REMARKS.

I felt much honored, Mr. President, when, in arranging the plan for the present evening, you assigned to me the duty of saying in behalf of the Geographical Society, some words of welcome to one of the most distinguished explorers of the present time—I mean, of course, Professor Nordenskjöld, of Stockholm, Sweden. I regret exceedingly to learn, by the letter you have read to us, that he cannot be present with us to-night, but is on his way to Europe.

Fellows of the Geographical Society, Ladies and Gentlemen, in view of the circumstance that Professor Nordenskjöld, is not here, it may not be amiss for me to occupy, even at this late hour,

a few moments of your time to solicit your attention to some of the important features of the explorations of our absent friend—absent I know he is, not in consequence of any indisposition on his part, but for the simple reason that he is now bound on his way, for the fifth time, to the frozen regions of the North—not now with the view of reaching the north pole of the earth, but with the practical view of opening up to the advantage of commerce the great rivers Obi and Yenisei, which flow through Siberia to the Arctic ocean. In a few days he will take ship and sail for those distant regions. As long ago as 1854, Professor Nordenskjöld was conspicuous before the world for the developments he had made in Arctic discovery and in Arctic science; and it affords us the highest satisfaction to know that, after fitting out expedition after expedition from his native land, pushing them forward with all the ardor of his nature, our distinguished visitor, Dr. Petermann, has not withheld at any time the support of his great name and of his powerful influence to assist Professor Nordenskjöld in his great, noble, and heroic efforts to develop the resources of the North. [Applause.] And, indeed, while we have listened to the words of wisdom that have fallen from the lips of Dr. Petermann, we may wonder whether he has not himself penetrated into those remote and desolate regions, and yet our friend Bayard Taylor has told us that he has not, but that, like Von Moltke, he directs the great machinery by which, in the course of a few years—in the course of his own short life—there has been developed more geographical knowledge than had been evolved in all the centuries that had gone before. [Applause.] And to Dr. Petermann we must attribute, in a large measure, this wonderful development. And I congratulate you, fellow members of the Geographical Society—I congratulate the Society itself, of which I am proud to be a member—more proud to-night than at any other time of my life—when we have added to the roll of our honorary fellowship the name of so illustrious a sympathizer in the work which unites us, not as a formal compliment, sent to him at a distance, but as one of the audience we have the honor to address—and when we also have the honor of receiving one who, as the president has stated, has done so much for geographic progress, that we feel almost as if they were fellow-citizens among us, and as if the lines that divide peoples were broken down, and that there were a universal confederation among the nations of the earth, brought down to the level of our interest in, and our affection and devotion for, geographic knowledge. [Applause.] Geography is indeed the

science of all sciences which blends men together in one universal comity of feeling and affection; for in that science do we find all the other sciences combined. Each in its own way, one science after another pays tribute to it to make a grand total. That total is summed up in the one word, "Geography,"—and to that one word our honored guest here, Dr. Petermann, holds the key. [Applause.]

Now, with regard to the Arctic regions, let me say one word. It is a region in which, in former years, I have been greatly interested. I have penetrated there four different times, and though I have not exactly been upon the track of Professor Nordenskjöld at any time, yet he has broken almost as far through the great barrier which invests the Arctic sea as any one has done at any time in any direction. The Austrian expedition, in which Dr. Petermann had so large an interest, penetrated nearer to the north pole and discovered land nearer to the north pole than any on the Atlantic side—far away to the north, along the land which was discovered originally in 1854, and re-discovered by myself in 1860, extending it nearly to the same latitude as the German exploration; and while at the same time other developments were made, and discoveries made which were predicted by Dr. Petermann, upon the Behring's Straits side. The result of these explorations of Professor Nordenskjöld and the Germans has proven the fact that around that great region investing the north pole of the earth, which is shown on the map before you, there is a vast barrier of ice, and within it, what I have always advocated before this Society, is an open, free and navigable sea. [Applause.] Dr. Petermann and I have had some difference of opinion as to the stretch of land in that direction, but I am sure that that vast expanse of sea—almost 3,000 miles in diameter—that great waste of water rolls as wildly throughout the winter as throughout the summer, and dashes against its icy walls as wildly as the waves of the Atlantic or the Pacific ocean, and that if we could once break our way through that barrier into that sea, we should find it as navigable as any sea upon the whole earth, either in summer or in winter. [Applause.] The discoveries of Nordenskjöld or others will not prove that there is any milder climate around the north pole than at some distance to the south of it, but that vast expanse, which is kept open by the motion of the waves and the air, which is necessarily receiving radiated heat from that body of water, is somewhat modified in its temperature. It is a cold, desolate region, yet in consequence of the vastness of the area of that sea it is, in my judgment, perpetually open. It cannot be open, however, if the

land which Dr. Petermann suggests stretches far away from the north pole and towards Behring's straits. But I must differ from Dr. Petermann in that particular. I believe that the line marked upon the map there around that great area, marks nearly the actual line of the land investing the great sea. We have a great current, a continuation of the Gulf stream, sending the tepid waters of the equatorial regions far away into the north, while, on the other hand, there is a cold current sweeping down Baffin's bay and working its way down along the eastern coast of America, giving cooling and refreshing water to the bathers of Newport and Long Branch. But for that current this eastern shore could never have been inhabited by man.

Now ladies and gentlemen, with this brief outline, which is all I can do now, in obedience to the call which was made upon me by the president, I will close my remarks. But, first I will take the liberty of expressing my opinion with respect to recent explorations in the Arctic regions. It is my opinion that the English expedition which has passed up through Baffin's bay into Smith's sound, taking the track first followed by Dr. Kane, then by myself, and afterwards by Captain Hall—that the expedition from which we have not heard for a long time, but from which we will hear soon—that that expedition will push its way through the icy waters of Smith's sound, and over the ice wherein they may be inclosed, into the great sea which Kane discovered, and which I rediscovered afterwards. On the waters of that great sea they will be able to launch their boats and push onward to the north pole. But if they do not accomplish this result, if it is not for the English flag first to float over the north pole, I hope the time will come, and that not far distant, when either I or some other American citizen will lead an expedition up to Grinnell Land, in latitude eighty-two degrees—where I planted a little flag in 1861, and where it is standing at the present moment, unless the bleak Arctic storms have rent its starry folds—and picking it up, will carry it on and plant it—first of all flags—upon the north pole of the earth. [Applause.]

The president then declared the meeting adjourned.